

REMARKS/ARGUMENTS

This Amendment is being filed in response to the Office Action dated August 7, 2009. Reconsideration and allowance of the application in view of the amendment made above and the remarks to follow are respectfully requested.

Claims 1-3, 5-14 and 16-19 are pending in the Application.

In the Office Action, the specification is objected to for informalities. The specification is amended herein to correct the noted informalities. It is respectfully submitted that the specification is in proper form and it is respectfully requested that this objection to the specification be withdrawn.

In the Office Action, claim 16 is objected to for an informality. Applicants appreciate the interpretation that claim 16 should properly depend from claim 8 and have amended claim 16 in accordance with this interpretation. Accordingly, withdrawal of the objection to claim 16 is respectfully requested.

Claims 10, 11, 13 and 14 are rejected under 35 U.S.C. §112, second paragraph. This rejection of claims 10, 11, 13 and 14 is respectfully traversed. However, in the interest of advancing consideration and allowance of the claims, claims 10, 11, 13 and 14 are amended, without prejudice herein. Accordingly, it is

respectfully submitted that claims 10, 11, 13 and 14 are in proper form and it is respectfully requested that this rejection under 35 U.S.C. §112, second paragraph, be withdrawn.

In the Office Action, claims 1-3, 6, 7, 9-11 and 19 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 3,836,537 to Sastri ("Sastri") in view of U.S. Patent No. 5,776,615 to Wong ("Wong"). Claim 5 is rejected under 35 U.S.C. §103(a) over Sastri in view of Wong in further view of U.S. Patent No. 3,838,512 to Sanderson ("Sanderson"). Claims 8, 12-14, 17 and 18 are rejected under 35 U.S.C. §103(a) over Sastri in view of Wong in further view of U.S. Patent No. 5,142,785 to Grewal ("Grewal"). Claim 16 is rejected under 35 U.S.C. §103(a) over Sastri in view of Wong in further view of Grewal in further view of Sanderson. These rejections are respectfully traversed. It is respectfully submitted that claims 1-3, 5-14 and 16-19 are allowable over Sastri in view of Wong alone and in view of any combination of Sanderson and Grewal for at least the following reasons.

The Office Action alleges that "Sastri discloses the coating comprising an implanted layer of Cr (36) that is implanted into the metal substrate" citing a "dictionary.com" definition of the term "implant". (See, Office Action, page 3.)

In a Response to Arguments section of the Office Action, it is stated that "since the layers [of Sastri] are adhered to one another and to the substrate, they must be implanted to some extent to each other or they would not stay together as disclosed."

These interpretations of Sastri and the term "implant" are respectfully traversed.

However, in the interest of expediting consideration and allowance of the pending application, Applicants have elected to amend the claims to recite in substantial part, (emphasis added) "an ion implanted layer of Cr that is ion implanted into the metal substrate." This amendment to the claims is provided without prejudice and the Applicants respectfully reserve all rights under the doctrine of equivalents including a right to reintroduce subject matter.

As a definition for the term "ion implanted", the Applicants cite a definition provided by, Wikipedia, "Ion implantation. (2009, September 17). In Wikipedia, The Free Encyclopedia. Retrieved 15:53, November 6, 2009, from hypertext transfer protocol Internet address:

[//en.wikipedia.org/w/index.php?title=Ion_implantation&oldid=314496103](http://en.wikipedia.org/w/index.php?title=Ion_implantation&oldid=314496103)." (hereinafter, "Wiki")

As clear from Wiki (emphasis added):

Ion implantation is a materials engineering process by which ions of a material can be implanted into another solid, thereby changing the physical properties of the solid. Ion implantation is used in semiconductor device fabrication and in metal finishing, as well as various applications in materials science research. The ions introduce both a chemical change in the target, in that they can be a different element than the target, and a structural change, in that the crystal structure of the target can be damaged or even destroyed by the energetic collision cascades.

In contrast with what is asserted in the Office Action, Sastri is clear that the layer 36 referred to in the Final Office Action is "an alloy coating 36" (See, Sastri, Col. 5, lines 66-67.) Further, Sastri, Col. 5, lines 46-49 also refers to (emphasis added) "a second example, blades were similarly processed for the application of two 250-Angstrom thick layers of chromium rather than the chrome-platinum alloy of the previous example."

While it is not disputed that in Sastri or any coating/layer deposition process, there is adhesion between layers, this adhesion does not rise to the limitations provided by the claims recitations.

It is respectfully submitted that as readily appreciated by a person of ordinary skill in the art, a coating or a layer is not

ion implanted into a lower layer, such as a substrate, as recited in the claims. Coatings or layers as described by Sastri are deposited onto a lower layer and typically are adhered, however, it is respectfully submitted that this has no bearing on the claims as presented.

It is respectfully submitted that the cutting member of claim 1 is not anticipated or made obvious by the teachings of Sastri in view of Wong. For example, Sastri in view of Wong does not teach, disclose or suggest, a cutting member that amongst other patentable elements, comprises (illustrative emphasis added) "a metal substrate which is provided with a cutting edge, at least a portion of the substrate including the cutting edge being provided with a coating comprising carbon, wherein the coating comprises a plurality of stacked pairs of layers, each pair comprising a first layer mainly comprising carbon and a second layer mainly comprising a metal, and each pair having a thickness between 1 and 10 nm, wherein the coating comprises an ion implanted layer of Cr that is ion implanted into the metal substrate" as recited in claim 1 and as substantially recited in claims 8 and 19.

In Sastri, it is clear that the Cr is deposited as a discrete coating or layer and therefore, has nothing to do with the claims

as presented.

Sanderson and Grewal are introduced for allegedly showing elements of the dependent claims and as such, do nothing to cure the deficiencies of Sastri in view of Wong.

Based on the foregoing, the Applicants respectfully submit that claims 1, 8 and 19 are patentable over Sastri in view of Wong in view of Sanderson and notice to this effect is earnestly solicited. Claims 2-3, 5-8 and 9-18 respectively depend from one of claims 1 and 8 and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of the claims.

For example, it is respectfully submitted that the cutting member of claims 5 and 16 are not anticipated or made obvious by the teachings of Sastri in view of Wong in view of Sanderson. For example, Sastri in view of Wong in view of Sanderson does not teach, disclose or suggest, a cutting member that amongst other patentable elements, comprises (illustrative emphasis added) "wherein between the implanted layer of Cr and a pair of layers, which is closest to the substrate, the coating comprises a basic layer of CrN" as recited in claims 5 and 16.

It is undisputed that Sastri in view of Wong does not teach, disclose or suggest the recitations of claims 5, as Sanderson is cited for showing this claim recitation. (See, Office Action, pages 5-6, numbered paragraph 7.) However, it is respectfully submitted that reliance on Sanderson, for that which is admitted missing from Sastri in view of Wong, is misplaced.

Sanderson is clear that (emphasis added) "[t]wo coatings other than a polymer or copolymer may be used [on a blade] and the outer of these two coatings is preferably a nitride of the alloy of chromium". The other coatings which are preferably other than a nitride of an alloy of chromium are preferably metallic, being either of a substantially pure metal (e.g. chromium) or an alloy thereof, for example an iron/chromium alloy as hereinbefore described. When an alloy coating is used, it is preferably the same alloy as that from which the nitride is derived. For example, the alloy may be an iron/chromium alloy of the type hereinbefore described and the nitride coating is then preferably derived from the same alloy. Similarly alloy and nitrided alloy coatings may be derived from chromium/platinum alloys." (See, Sanderson, Col. 7, lines 21-35.)

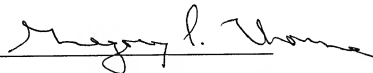
Accordingly, Sanderson, in contrast with what is recited in claim 5, Sanderson shows, for example, a chromium metal layer overlaid by a nitride of the alloy of chromium. In other words, Sanderson does not teach, disclose or suggest that the coating closest to the substrate, comprises a basic layer of CrN as substantially recited in claims 5 and 16.

Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Applicants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Applicants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

Applicants have made a diligent and sincere effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited.

Respectfully submitted,

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